QMS® MAGNUM® Emulation User's Guide

Contents

1 Introduction

2   Installation

A   QMS Customer Support

B Character Tables

Index

❖

1

Introduction

In This Chapter . . .

- System requirements
- Manual overview
- MAGNUM emulation features

Introduction

The QMS MAGNUM emulation is compatible with the powerful industrial graphics Code V programming language used on the QMS CF2215 printer. It gives you advanced MAGNUM controller technology (the standard for industrial graphics applications) designed to meet your bar code, label, and form printing needs.

» **Note:** *This emulation doesn't support IBM interfaces.*

System Requirements

To use the QMS MAGNUM emulation, you need the following:

For this system requirement...	You need...
QMS Crown Printer	The QMS MAGNUM emulation is available only on the following QMS Crown printers at the specified (or greater) software release level: —QMS 1060E Print System (software release 2.0.15) —QMS 1660E Print System (software release 2.0.15) —QMS 2025 Print System (software release 8.2.0) —QMS 3225 Print System (software release 8.2.0) —QMS 3825 Print System (software release 8.2.0)
Hard Disk	Either an external or an internal hard disk is required to load the QMS MAGNUM emulation on any of the above QMS Crown printers.
Memory	4 MB more than standard memory is required to load the QMS MAGNUM emulation on any of the above printers except the QMS 3825, which comes standard with maximum memory of 32 MB.

About the Documentation

You received the following documentation with the QMS MAG-NUM emulation:

	QMS MAGNUM Emulation User's Guide	You're now looking at this manual. It contains detailed information on installing and using the QMS MAGNUM emulation.
	QMS Code V Version II Programming Manual	This manual provides command reference information for the Code V Version II programming language used in the QMS MAGNUM emulation.
	Other Documentation	In addition to this documentation, you will also have your QMS Crown printer documentation.
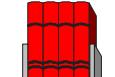
About This Manual

This manual contains detailed information on installing and using the QMS MAGNUM emulation. It is divided into the following sections:

1	**Introduction**	Presents an overview, provides system requirements, and describes the QMS MAGNUM emulation documentation.
2	**Installation**	Provides the installation procedures, settings for the printer's memory, details on how to configure the emulation memory client, and information on the QMS MAGNUM emulation menu.
A	**QMS Customer Support**	Provides product sales and support telephone numbers and describes how to communicate with QMS through the QMS Bulletin Board, CompuServe, the Internet, and Q-FAX.
B	**Character Tables**	Provides the character substitution tables for the ISO character set and the PC Subset character set.

Conventions

The following typographic conventions are used throughout this manual:

`Mixed-Case Courier`	Text you type, and messages and information displayed on the screen.
`Mixed-Case Italic Courier`	Variable text you type; replace the italicized word(s) with information specific to your computer, printer, or network.
lowercase italic	Variable information in text.
UPPERCASE	File and utility names.
↵	Press the Enter key (PC).
^	Press and hold down the Ctrl key (PC)

» **Note:** *Notes contain tips, extra information, or important information that deserves emphasis or reiteration.*

▲ **Caution**: *Cautions present information that you need to know to avoid equipment damage, process failure, or extreme annoyance.*

What's in the Shipment

In addition to this manual, the QMS MAGNUM emulation contains the following:

■ *QMS Code V Version II Programming Manual*

■ 1 disk

■ Registration/warranty card

Make sure that all items are included in your shipment before install-
ing the emulation. If any items are missing or damaged, contact your
QMS Vendor. See appendix A, "QMS Customer Support," for product
sales and support information.

Registering the Product

QMS is committed to developing print systems that offer you flexible,
efficient solutions, so we're interested in knowing how you plan to use
this product.

To register by mail, fill out and send in your warranty card. To register
by telephone, in the US, call QMS toll-free at (800) 637-8049. In other
countries, see appendix A, "QMS Customer Support," for the appro-
priate telephone number.

MAGNUM Emulation Features

This brief overview will acquaint you with the basic QMS MAGNUM
emulation features and how they can benefit you.

Code V Programming Language

The QMS Code V programming language is a powerful industrial
graphics language that features the following:

—Scalable MAGNUM characters

—Rotatable fonts, bar codes, and graphics

—Specifications for over 20 different bar code symbologies

—Advanced data handling capabilities such as automatic repetition,
automatic incrementing and decrementing, forms storage, and
automatic filling of forms with variable data at print time.

—Bit image plotting, scaling, and rotating

User Benefit—You can print industrial graphics applications on your normal workgroup or departmental laser printer.

Graphics Capabilities

This emulation allows for the generation of forms and labels, including bar codes (UPC, Code 39, Code 128, and other codes). Other graphic features include lines, boxes, forms, and halftone patterns.

User Benefit—This extensive suite of industrial graphics capabilities assists you with your most complex bar code, label, and form printing needs.

Fonts

The following nine fonts are downloaded to the printer's hard disk when the emulation is installed:

Font	Font Description	Characters Per Inch
Font 4	Code V Near Letter Quality	Size 0 (Lookup)
Font 5	Code V Near Letter Quality	10 cpi
Font 6	Code V Near Letter Quality	12 cpi
Font 7	Code V Near Letter Quality	13.3 cpi
Font 8	Code V Near Letter Quality	15 cpi
Font 9	Code V Near Letter Quality	17.1 cpi
Font 10	OCR—A Size 1	10 cpi
Font 11	OCR—B Size	10 cpi
Font 12	Symbol Set	

User Benefit—These standard fonts increase the emulation's functionality and allow you to create more complex and distinctive industrial graphics documents.

❖

2

Installation

In This Chapter . . .

- Installing and configuring printer memory
- Downloading the emulation
- Using the emulation

Getting Started

The following major steps are involved in setting up and using the QMS MAGNUM emulation:

- Adding additional memory (if necessary)
- Configuring printer memory
- Using the emulation

Adding Additional Memory

The QMS MAGNUM emulation requires 2 MB of memory for optimal emulation download and performance. When you have only the standard memory on your QMS Crown printer, that memory has been configured at the factory, and any excess has either been allocated to the display list or frame buffer, or it has been distributed among all clients (depending on which printer you have). QMS recommends the following for your printer:

For this printer...	You need to...
QMS 1060E/ 1660E	Add 4 MB of additional RAM. See chapter 6, "Printer Options," in your printer *Reference* guide for information on installing additional memory. After the memory is installed, refer to the "Configuring Printer Memory" section, later in this chapter, for information on changing the K Mem Emulation memory setting. » **Note:** *Remember that an optional hard disk is required to download the MAGNUM emulation.*

For this printer...	You need to...
QMS 2025/ 3225	Add 4 MB of additional RAM. Contact your QMS vendor for information on ordering and installing additional RAM. See appendix A, "QMS Customer Support," for a list of service and world-wide sales telephone numbers.
QMS 3825	No additional memory is required, so you only need to reconfigure the printer's memory. See "Configuring Printer Memory" in the next section of this chapter, for information on changing the K Mem Emulation memory setting.

Configuring Printer Memory

This section provides information on configuring the emulation memory settings for the QMS MAGNUM emulation.

» **Note:** *If your printer already has this memory correctly configured, you can skip to the "Downloading the Emulation" section, later in this chapter.*

Reconfigure the Memory

You need to allocate at least 2 MB of K Mem Emulation memory on any QMS 1060E/1660E/2025/3225/3825 Print System in order to download and use the QMS MAGNUM emulation.

» **Note:** *The printer may be unable to load the emulation until its memory is reconfigured. QMS recommends that you add an additional 4 MB of memory to any QMS Crown printer (except the QMS 3825, which comes standard with 32 MB maximum memory) for optimal QMS MAGNUM emulation support. Additional memory allocated to optional emulations improves performance.*

Procedure

Before you reconfigure the printer's memory, print an advanced status page. It provides a record of all current configuration settings, which you may need if you have to reset the printer to its current default settings. (See your printer documentation for information on how to print an advanced status page.)

We recommend that you read this entire procedure before modifying any memory settings. If you experience problems when configuring the printer's memory, use the advanced status page to reset the printer to your current default memory settings.

s **Caution:** *If you have already reconfigured your QMS printer's memory with settings unique to your print environment, do not perform an Administration/Memory operation before you either write down any unique memory settings or print an advanced status page . You will need this information if you have to return the printer to its current memory settings. A Restore Defaults setting is available on your printer, if you need to cancel all configuration changes and reset the printer to its factory defaults.*

1 **Access the Administration/Memory menu via the control panel.**

See your printer documentation for details on how to access menu options.

2 **Change the Administration/Memory/K Mem Emulation setting on your printer to 2 MB (2048 KB).**

» **Note:** *If your printer already has this memory correctly configured, you can skip to the "Downloading the Emulation" section, later in this chapter.*

Press the Previous or Next key to advance through the different memory clients. With the Administration/Memory/K Mem Emulation memory client displayed in the message window, press the Select key once.

» **Note:** *To configure this memory client to 2 MB (2048 KB) minimum, you may need to take memory away from the Administration/Memory/Framebuffer memory client. Keep in mind that a memory setting can be equal to or higher than the minimum value, but it can't be lower than that value.*

A numerical value is displayed (expressed as a 5-digit number), showing the current memory setting for that specific memory selection. Using the Previous or Next key, change the value of each digit (up or down) to reflect the new 2 MB (2048 KB) memory setting.

You change one digit at a time much like setting the time and date on a digital watch. The current input digit is highlighted and the cursor flashes. When you have reached the correct digit, press the Select key once. This accepts the displayed digit and moves the cursor to the next digit. After the last digit is entered, press the Select key to complete the change. The new memory setting is displayed for a moment, and then the current Memory menu selection displays. (See the example that follows this procedure.)

If you set the wrong value for this memory client, repeat this step. If you are unable to allocate 2 MB (2048 KB) to the Administration/Memory/K Mem Emulation client and Administration/Memory/Framebuffer is configurable on your printer, then complete step 3 first and return to this step; otherwise continue at step 4.

3 **If you are unable to change the Administration/Memory/K Mem Emulation value to 2 MB (2048 KB), then first change the Administration/Memory/Framebuffer setting to a lower value, if it is configurable on your printer.**

Access Administration/Memory/Framebuffer and choose a smaller media size at the same or a lower resolution. For example, when using a QMS 1060E Print System with 12 MB of RAM, the default media size is Legal and the resolution is 600 DPI. Change it to A4 media size at 600 DPI. After you have decreased the Framebuffer memory requirements, then return to step 2.

4 **When you have allocated at least 2 MB (2048 KB) to Adminis-tration/Memory/K Mem Emulation, save your changes and press the Menu key until the Online or Ready indicator lights.**

The printer automatically restarts after you save changes and exit from the configuration menu. It may take a few minutes before it returns to `IDLE`.

5 **Print a start-up page or an advanced status page to confirm the memory reallocaton.**

See your printer documentation for information on printing either of these pages.

6 **Reconfigure the other configuration settings, if necessary for your environment.**

Keep in mind that K Mem Emulation must be a minimum of 2 MB (2048 KB).

Example

» **Note:** *This is an example of the control panel messages on a QMS 1660E Print System. The messages on a QMS 1060E Print System are slightly different. See chapter 4, the "Accessing the Configuration Menu" section of the Reference in the QMS 1060E printer documentation, for more detailed information. In this example, you start accessing menu options at the Administration menu.*

Use this key...	to...	The message window reads...
Select	Advance to the Administration/ Memory menu.	`MEMORY` `K MEM FOR SPOOL`
Next	Advance to the K Mem Emulation selection.	`MEMORY` `K MEM EMULATION`
Select	Access the K Mem Emulation selection and displays a 01356 memory setting with the first digit flashing. Keep 0 as the first digit of this number.	`K MEM EMULATION` `01356`

Use this key...	to...	The message window reads...
Previous or Next then Select	Move to the second digit and return or advance to 2.	`K MEM EMULATION` `0`<u>`2`</u>`356`
Previous or Next then Select	Move to the third digit and return or advance to 0.	`K MEM EMULATION` `02`<u>`0`</u>`56`
Previous or Next then Select	Move to the fourth digit and return or advance to 4.	`K MEM EMULATION` `020`<u>`4`</u>`6`
Previous or Next then Select	Move to the fifth digit and return or advance to 8.	`K MEM EMULATION` `0204`<u>`8`</u>

Select	Verify the K Mem Emulation setting.
	
	Return (after 3 seconds) to the K Mem Emulation client.
		`02048`
		`IS SELECTED`
		
		`MEMORY`
		`K MEM EMULATION`

Downloading the Emulation

The QMS MAGNUM emulation comes as a PostScript file on a PC floppy disk. This section describes how to download the QMS MAG-NUM emulation from the floppy disk to the printer's hard disk.

» **Note:** *At least one hard disk (internal or external) must be installed on the QMS Crown printer before you can download this emulation. If more than one hard disk is available, the emulation automatically installs itself on the disk with the most free storage space.*

Once the emulation is downloaded, the only way to remove it is to reformat the hard disk (Administration/Disk Operations/Format Disk menu or the PS Executive Series Utilities).

Procedure

1   If necessary, connect the PC to the printer's parallel or serial port.

2   Turn on the printer, and wait for `IDLE` to appear in the message window.

3   Insert the emulation disk in your PC's 3.5" disk drive, and change to that drive (for example, if you're using the A drive, type `a:↵`).

4   Send the emulation to the printer's hard disk.

■   If your PC and printer are connected through the parallel port, type

```
copy /b *.ps lpt#↵
```

where # is 1 to 3. (`/b` refers to binary files.)

■   If your PC and printer are connected through the serial port, type

```
copy /b *.ps com#
```

where # is 1 to 4. (`/b` refers to binary files.)

5   When the downloading is complete, reboot the printer.

The emulation is ready to be used.

Using the Emulation

After the QMS MAGNUM emulation is properly downloaded and configured, its options display in the Administration/Emulations/MAGNUM menu. Four configuration choices are available. See the *QMS Code V Version II Programming Manual* (included in this shipment) for more detailed information on these options.

The MAGNUM options (described in the following sections) select the default values used by the emulation when interpreting the various document processing features of your QMS Crown printer. See your printer documentation for information on using the control panel and configuration menu.

QMS recommends that you set the emulation for the desired interface to MAGNUM via the Administration/Communications/*interface*/Emulation setting (where *interface* is your communications interface).

» **Note:** *If ESP is desired for the interface, then set the Administration/ Emulation/ESP Default setting to MAGNUM.*

Setting Default Font Parameters

Default Font

Use the Administration/Emulations/MAGNUM/Default Font menu to set the default font for the MAGNUM emulation. This font is used if the printer doesn't receive a font selection command in the data stream. See the *Code V Version II Programming Language Manual* for more information about selecting a default font.

Menu	Administration/Emulations/MAGNUM/Default Font
Choices	Font 4—Size 0 (Look-up characters)
	Font 5—Code V Near Letter Quality 10 cpi
	Font 6—Code V Near Letter Quality 12 cpi
	Font 7—Code V Near Letter Quality 13.33 cpi
	Font 8—Code V Near Letter Quality 15 cpi
	Font 9—Code V Near Letter Quality 17.14 cpi
	Font 10—OCR-A Size 1 10 cpi
	Font 11—OCR-B Size 1 10 cpi
	» **Note:** *The OCR fonts included with the emulation have a slightly different cell height compared to earlier versions of the fonts. They may appear slightly different on your QMS Crown printer, if you're executing Code V programs that use earlier versions of the OCR fonts.*

Default	Font 5
Notes	The following is a sample of how the fonts look:

FONT #4, Size 0 Lookup

FONT #5, 10 cpi

FONT #6, 12 cpi

FONT #7, 13.33 cpi

FONT #8, 15 cpi

FONT #9, 17.14 cpi

FONT #10, OCRA 10 cpi

FONT #11, OCRB 10 cpi

» **Note:** *Font 12, symbol set, is also available for use with this emulation. It contains symbols such as copyright, trademark, UL, and TUV approval. See the Code V Version II Programming Language Manual for more information about standard symbol set font #12.*

Setting Form Setup Parameters

Use the Administration/Emulations/MAGNUM/Form Setup menu to change the line spacing.

Lines Per Inch

Sets the number of lines printed per inch (line spacing). Line spacing controls the distance between lines of text when your files are printed.

Menu	Administration/Emulations/MAGNUM/Form Setup/ Lines Per Page
Choices	3—lpi 4—lpi 6—lpi 8—lpi
Default	6

Setting Misc Parameters

Use the Administration/Emulations/MAGNUM/Misc menu to set the default ISO character set, characters to ignore, line termination, and null value.

ISO Char Set

Sets the ISO Character Set, as defined by the International Standards Organization (ISO), for the printer. In addition to the 9 ISO character sets, two non-ISO character sets (OCR-A Size 1 and OCR-B Size 1) can be set via this option.

Menu	Administration/Emulations/MAGNUM/Misc/ISO Char Set
Choices	USA, UK, Sweden/Finland, Norway/Denmark, Japan, Germany, France, Italy, Spain, PC Subset, Code VI
Default	USA
Notes	See appendix B, "Character Tables" for more information on character substitutions.

Set 1ST Ignore

Defines the first character that the controller is to ignore when processing MAGNUM print jobs. If your host sends extra characters with your data stream that have no effect on the printer, setting this option will improve processing time.

Menu	Administration/Emulations/MAGNUM/Misc/Set 1ST Ignore
Choices	0 to FF
Default	0
Notes	Ignores characters set in hexadecimal.

Set 2ND Ignore

Defines the second character that the controller is to ignore when pro-
cessing MAGNUM print jobs. If your host sends extra characters with
your data stream that have no effect on the printer, setting this option
will improve processing time.

Menu	Administration/Emulations/MAGNUM/Misc/Set 2ND Ignore
Choices	0 to FF
Default	0
Notes	Ignores characters set in hexadecimal.

CR = CR + LF

Stipulates whether each carriage return (CR—hex 0D) in the print job
is translated to a carriage return/line feed combination (CR/LF—hex
0D/hex 0A).

Menu	Administration/Emulations/MAGNUM/Misc/CR=CR+LF
Choices	On—Translates all carriage returns to a carriage return/line feed combination.
	Off—Use carriage returns only as carriage returns.
Default	Off

LF = CR + LF

Stipulates whether each line feed (LF—hex 0A) in the print job is
translated to a carriage return/line feed combination (CR/LF—hex 0D/
hex 0A).

Menu	Administration/Emulations/MAGNUM/Misc/LF=CR+LF
Choices	On—Translates all line feeds to carriage return/line feed combinations.
	Off—Use line feeds only as line feeds.
Default	Off

LF = LF + LF

Stipulates whether each line feed (LF—hex 0A) in the print job is translated to a line feed/line feed combination (LF/LF—hex 0A/hex 0A).

Menu	Administration/Emulations/MAGNUM/Misc/LF=LF+LF
Choices	On—Translates all line feeds to line feed/line feed combinations.
	Off—Use line feeds only as line feeds.
Default	Off

Ignore Nulls

Stipulates whether to ignore all nulls (hex 00) received from the host.

Menu	Administration/Emulations/MAGNUM/Misc/Ignore Nulls
Choices	On—Ignores all nulls received from the host.
	Off—Process all nulls with the data stream.
Default	Off

Setting Code V Setup Parameters

Use the Administration/Emulations/MAGNUM/Code V Setup menu to set the default Code V programming language values.

» **Note:** *QMS recommends that these options be changed only by experienced Code V programming language users.*

Conversion

Sets the MAGNUM emulation to conversion On mode.

Menu	Administration/Emulations/MAGNUM/Code V Setup/Conversion

Choices	On—Enables the printer to interpret Code V programming language commands.
	Off—Sets the printer in Straight Thru mode, disabling interpretation of Code V programming language commands.
Default	Off

Free Format

Sets the MAGNUM emulation to Free Format mode, which ignores all hex values from 00 to 1F.

Menu	Administration/Emulations/MAGNUM/Code V Setup/Free Format
Choices	On—Enables Free Format mode.
	Off—Disables Free Format mode.
Default	Off
Notes	To enable Free Format mode on MAGNUM emulation start-up, set both this option and the Administration/ Emulations/MAGNUM/Code V Setup/Free Format/ Conversion option to On.
	When Free Format is enabled, form control characters (carriage return and line feed) are ignored, and paper positioning must be controlled via the following Code V programming commands.
	^- = Carriage return
	^* = Line feed
	^, = Form feed
	See the *Code V Version II Programming Language Manual* for more information on this option.

Ignore Mode

Sets the MAGNUM emulation to ignore all data sent until receipt of a ^A command.

Menu	Administration/Emulations/MAGNUM/Code V Setup/Ignore Mode
Choices	Enable—Enables Ignore mode.
	Disable—Disables Ignore mode.

Default	Disable
Notes	To enable Ignore mode on MAGNUM emulation start-up, set both this option and the Administration/Emulations/ MAGNUM/Code V Setup/Ignore Mode/Conversion option to On. See the *Code V Version II Programming Language Manual* for more information on the ^X and ^A commands that toggle the Ignore Mode.

Control Char

Sets the default control character.

Menu	Administration/Emulations/MAGNUM/Code V Setup/Control Char
Choices	00 to 99
Default	94
Notes	QMS recommends that the control character be a non-printable character. This includes alphanumeric characters, characters between Hex 00 and Hex 11F (inclusive), lowercase characters, and the character N (Hex 4E).
	Remember that the control character may also be changed by using Code V programming language commands. See the *Code V Version II Programming Language Manual* for more information.

^PY^- Line TRM

Stipulates the number of characters the controller ignores following the ^PY^- command, which enables MAGNUM conversion.

Menu	Administration/Emulations/MAGNUM/Code V Setup/^PY^- Line TRM
Choices	One Character—Forces a line feed and starts printing on the second line of the page. Since the ^PY^- must be on the first line of the program and must be the only command on that line, a carriage return and line feed must follow it. The line feed forces printing to begin on the second line.
	Two Character—Ignores both carriage return and line feed and starts printing on the first printable line of the page.

Default	One Character
Notes	All characters are absorbed until line termination is set to one or two lines.

Slash in Zero

Prints zeros with or without slashes.

Menu	Administration/Emulations/MAGNUM/Code V Setup/Slash In 0
Choices	Enable—Prints a slash in the zero (ø).
	Disable—Prints a zero with no slash (0).
Default	Enable

Vertical MAG COR

Sets the vertical MAGNUM correction.

» **Note:** *This option is provided for users of the Code V Version I programming language. If you modified programs that utilized rotated MAGNUM characters in Code V Version I to compensate for elongated characters caused by the 60 x 72 dot matrix used by impact printers, then set this option to On.*

In Code V version II, there is no elongating of rotated MAGNUM characters. Set this option to On if you wish to send your existing Code V Version I programs to the printer unchanged. If you don't have Code V Version I programs, or if you didn't encounter elongated MAGNUM characters, then leave this option set to Off.

Menu	Administration/Emulations/MAGNUM/Code V Setup/Vertical MAG COR
Choices	On—Adjusts the dots per inch to match the printer.
	Off—Doesn't adjust the dots per inch.
Default	Off

Vertical Scale

Sets the vertical scale.

» **Note:** *This option is provided for users of the Code V Version I programming language. Early printer controllers that used the Code V Version I programming language didn't match the resolution of the printers in which they were installed. Since the laser printer has a resolution of 300 dpi, you need to modify all positioning and dimensional commands in your Code V Version I programs for them to print correctly.*

The factory default setting for vertical resolution is 290 dpi. If you want to print programs written in Code V Version I without first modifying these commands, then set this option to On. If you do not have Code V Version I programs, leave this option at its default value (Off).

Menu	Administration/Emulations/MAGNUM/Code V Setup/Vertical Scale
Choices	Off—Sets vertical scale to 290 dpi resolution.
	On—Sets vertical scale to 300 dpi resolution.
Default	Off

Scale VAR Ratio

Defines the bar/space relationship in dots for variable (VAR) ratio bar
codes.

Menu	Administration/Emulations/MAGNUM/Code V Setup/Scale VAR Ratio
Choices	Off—Doesn't scale variable ratio bar codes. Allows you to take advantage of higher density bar code printing. On—Scales variable ratio bar codes to match the overall size of the same bar codes when printed on an impact printer.
Default	Off
Notes	If you have a program containing variable ratio bar codes that you printed previously on an impact printer, the bar:space ratio may be too small for your needs when this program is printed on your QMS Crown printer. This is due to the smaller dot size on laser printers.

❖

A

QMS Customer Support

In This Appendix. . .

- Sources of customer support
- QMS world-wide offices

Sources of Support

Several sources of help and information are available, depending on the type of help you need:

Your QMS Vendor

Your local vendor (the one from whom you bought the printer) may be best equipped to help you. Your vendor has specially trained service technicians available to answer questions, and the equipment to analyze your printer problems.

Your Application Vendor

Often, "printing" problems have more to do with the application being used than with the printer. In this case, the application manufacturer is the best source of help.

Q-FAX

Q-FAX, a QMS information retrieval service, provides application notes, technical support notes on common printing problems, and information about printer specifications, options, accessories, consumables, and prices.

In the United States and Canada, call (800) 633-7213 to reach Q-FAX. In all other countries, call (334) 633-3850. Have your fax number handy when you call (or place the call from your fax machine's handset).

You can choose to have either a directory (a list of currently available documents on a particular topic) or a specific document sent to you. The first time you call, request the directory (press 2 on your phone or fax keypad when prompted). Then call back to request specific documents. You can order up to three documents per call.

The QMS Corporate Bulletin Board System

The QMS Corporate Bulletin Board System (BBS) contains technical support notes, application notes, printer drivers, patches, and utilities, and you may leave technical questions not requiring an immediate response on electronic mail for the Sysop (System Operator).

The bulletin board [(334) 633-3632] operates at 1200, 2400, 9600, and 14400 baud, 8 data bits, no parity, 1 stop bit, with XMODEM, YMODEM, and ZMODEM capabilities. Contact the QMS Customer Response Center (CRC) for more information about the bulletin board.

CompuServe

Through CompuServe, you ask general (non-technical) questions, share information with other users, and access printing information and programs. When you use CompuServe, type

```
go qmsprint↵
```

to go directly to the forum where QMS is located. The QMS library section contains application notes, printer drivers, utilities, technical information, and announcement files.

Internet

The QMS server provides access to information about QMS products, the Customer Response Center, QMS printer drivers, and other general information about QMS.

If you have access to the World Wide Web, you can view the QMS home page at http://www.qms.com/. The QMS ftp resource is ftp.qms.com.

QMS Customer Response Center (CRC)

The QMS Customer Response Center (CRC) is available M-F, 7:00 am-6:00 pm, Central Standard Time, at (334) 633-4500 (US). You can also fax questions to the CRC at (334) 633-3716 (US). Please indicate whether you would like a faxed or a phoned reply.

If you call for assistance, have the following information ready so our technicians can help you more quickly:

- Your phone number, fax number, and shipping address

- A description of the problem

- The printer model and serial number

- The type of host computer you are using

- The type and version of operating system you are using

- The interface you are using, and, if serial, the protocol

- The application and version you are using

- The emulation you are using

- Your printer firmware version (listed on the status and start-up pages)

QMS World-wide Offices

QMS United States and Latin America

General Contact
1 (334) 633-4300
Fax 1 (334) 633-4866
Email info@qms.com

Customer Response Center (CRC)

Technical Assistance
 1 (334) 633-4500   7:00 am - 6:00 pm Central Time

Bulletin Board Service
 1 (334) 633-3632

Latin America Fax

1 (334) 639-3347

National Service

Service Information and Maintenance Pricing
 1 (800) 762-8894

On-Site Service and Depot Repair Information
 1 (800) 858-1597   7:00 am - 7:00 pm Central Time

Spare Parts Ordering and Information
 1 (800) 633-4300 x2530   8:00 am - 5:00 pm Central Time

QMS in Australia

Service Information and Maintenance

61-3 899 5777

Fax 61-3 899 0972

QMS Canada

General Contact

1 (514) 333-5940 or 1 (800) 361-3392
Fax 1 (514) 333-5949

National Service

On-Site Service and Depot Repair Information
 1 (800) 268-4969   8:30 am - 7:00 pm Eastern Time

Spare Parts Ordering and Information
 1 (800) 673-8060   8:30 am - 5:00 pm Eastern Time

Bulletin Board Service
 1 (905) 673-8215

QMS France

Service Information and Maintenance

33-1 4107 9393

Fax 33-1 4083 0110

QMS Germany

Service Information and Maintenance

49-211 596 1333

Fax 44-211 596 1397

QMS in Ireland

Service Information and Maintenance

35-3626 1666

Fax 35-316 260131

QMS in Japan

Service Information and Maintenance

81-3 3437 4030

Fax 81-3 3437 4067

QMS in The Netherlands and Belgium

Service Information and Maintenance

31-30414646

Fax 31-30413850

Service Information and Maintenance

31-30414646

Fax 31-30413850

QMS in Scandinavia

Service Information and Maintenance

46-8 725 5680

Fax 46-8 725 5681

QMS in South Africa

Service Information and Maintenance

27-11 3134000

Fax 27-11 8053611

QMS in Spain

Service Information and Maintenance

34-1 742 5013

Fax 34-1 320 8438

QMS in Switzerland

Service Information and Maintenance

41-1829 1111

Fax 41-1829 1781

QMS UK Ltd

Service Information and Maintenance

44-1844 261900

Fax 44-1844 261993

❖

B

Character Tables

In This Appendix. . .

- ISO character table
- PC Subset character table

Introduction

This chapter provides the ISO and the PC Subset character substitution tables used in the MAGNUM emulation.

ISO Character Table

The following substitutions occur automatically when one of the following ISO character sets is selected as the default character set:

ISO Character Set	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E	7F
USA	#	$	@	[	\	]	^	'	{	|	}	~	
UK	£	$	@	[	\	]	^	'	{	|	}	–	
Sweden/Finland	#	$	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü	
Norway/Denmark	#	$	@	Æ	Ø	Å	Ü	'	æ	ø	å	ü	
Japan	#	$	@	[	¥	]	^	'	{	|	}	–	
Germany	#	$	§	Ä	Ö	Ü	^	'	ä	ö	ü	ß	
France	£	$	á	°	ç	§	^	'	é	ù	è	¨	
Italy	£	$	á	°	ç	é	^	ù	à	ò	è	ì	
Spain	£	$	á	¡	Ñ	¿	^	`	°	ñ	ç	~	
PS Subset	See PC Subset Character Table.												
Code V I	#	$	@	[	¢	]	^	`	Ä	Ö	Å	Ü	£

PC Subset Character Table

The following character substitutions occur automatically when PC Subset is selected as the default character set.

7C = |	94 = ö	AA = ¬
80 = Ç	95 = ò	AB = ½
81 = ü	96 = ô	AC = ¼
82 = ä	97 = ù	AD = ¡
83 = â	98 = ÿ	AE = «
84 = ä	99 = Ö	AF = »
85 = à	9A = Ü	B3 = |
86 = å	9B = ¢	DC = ■
87 = ç	9C = £	E1 = ß
88 = ê	9D = ¥	E6 = μ
89 = ë	9E = **P**t	F1 = ±
8A = è	9F = ƒ	F8 = º
8B = Ï	A0 = á	F9 = º
8C = Î	A1 = í	FA = •
8D = ì	A2 = ó	FD = ²
8E = Ä	A3 = ú	FE = ■
8F = Å	A4 = ñ	FF =
90 = É	A5 = Ñ	
91 = æ	A6 = ª	
92 = Æ	A7 = º	
93 = Ô	A8 = ¿	

❖

Index

❖